

AUG 21 1969

ANNUAL SUMMARY STATEMENT OF ACTIVITIESSAN FRANCISCO  
PUBLIC LIBRARYFISCAL YEAR 1967-68

San Francisco's early growth required the City to become the first importer of water into the Bay Area and it is still the only importer within much of the area presently served by the Water Department. The later growth of former suburban areas into cities surrounded by new suburban areas has caused water consumption to reach a new high of 236 million gallons per day average for 1967-68. Consumption outside the City averaged 131 MGD, with 105 MGD being used in the City.

As a City-owned public utility authorized for the operation of properties purchased from Spring Valley Water Co., plus additional City-built facilities, the Water Department operates watersheds, reservoirs and transmission facilities, and serves customers in Alameda, Santa Clara and San Mateo Counties as well as in San Francisco. Facilities to serve the increasing demand for water within this area include 63,000 acres of watershed and other lands; five impounding and/or storage reservoirs with a total capacity of 77,330 million gallons; 1,393 miles of transmission and distribution mains; 13 city distribution reservoirs with a total capacity of 400+ million gallons; 163,000 meters to record deliveries of water to serve an estimated 2,500,000 people. Water is metered to individual consumers within San Francisco and is metered to water purveyors outside of the City who, in turn, distribute and meter to their customers.

As an operating utility the Department must comply with the standards set by appropriate State and Federal agencies within the restrictions established by Charter and the will of the electorate that voted for fluoridation of their water supply and who, in the final analysis, must approve bond issues for major capital expenditures. It is interesting to note that the largest bond issue ever undertaken by San Francisco was approved by a vote of more than 11 to 1 when the \$115,000,000, 1961 Water Improvement Bonds were approved.


The objectives of this Department are to deliver to all consumers a safe potable water in adequate amounts and at adequate pressures with accurate measurement, proper billing and collection through the efficient operation and maintenance of all facilities (some of which are more than 100 years old), and the continuing planning and construction of replacements and additions necessary to provide for the present and future needs of the approximately two and one half million people now being served in the City and the more rapidly growing Peninsula and South Bay areas.



Water is second, only to air, as an essential need of human life; therefore, objectives become in fact obligations. To meet these obligations requires long-range planning of Reconstruction and Replacement of existing facilities and Additions and Betterments to provide new and better facilities to meet increasing need for water and an increasing requirement for higher quality water. San Francisco supplies water to ships, and planes engaged in interstate traffic, and must meet both State and Federal requirements governing water quality. In 1963, the U. S. Department of Public Health Drinking Water Standards reduced the acceptable turbidity limits from 10 units to 5 units. Many industrial processes are sensitive to water quality and plant locations are determined by the availability of an adequate supply of high-quality water.

The Water Department is entirely self-supporting, financing all operations, maintenance, improvements, taxes, bond interest and redemption from revenues. Continuing Capital Expenditures (both Reconstruction and Replacement and Additions and Betterments) are financed from revenues; major expenditures are financed by Sale of Bonds. The 115 Million Dollar 1961 Water Improvement Bond Fund provided funds for the progressive construction of additional reservoirs, tunnel, pipelines, pumping facilities to meet the expected need of present customers into the 1980's. Construction of Bond Fund Projects was coordinated to keep pace with the actual need for water delivery with a minimum of interference with service to customers. Most of this work is completed or under construction with only a minor portion (approximately \$12 million) yet to be accomplished.

In addition to planning for the water needs beyond the 1980's, the Department also faces other problems associated with the increasing Bay Area population. In order to utilize the experience and knowledge of experts in various fields, the Department employed consultants to study the future needs of the present service area and of adjacent areas that may depend upon San Francisco's water system as they develop; the present water supply and potential sources for additional water supply to meet possible need; the present plant facilities and future plant requirements necessary to supply the water needed. A separate study was made of the present and potential uses of Department lands compatible with their primary purpose to produce, transport, store and deliver the needed quantities of high-quality water. A separate study was made of the feasibility, utility service, and leasing methods and procedures pertaining to Pleasanton Industrial Park Area. A study was made of the operating system to provide a master plan for centralized control of transmission, storage and delivery to improve efficiency and provide better service.



Digitized by the Internet Archive  
in 2017 with funding from  
San Francisco Public Library

<https://archive.org/details/annualsummarysta1967sanf>

Many problems currently facing this Department revolve around the population increase and the resulting pressure for more highways, freeways, rapid transit, both within the City and on the Peninsula; the maintaining of open space areas; and the pressure for recreational use of such open space adjacent to highly urbanized areas. All of these problems impose a burden upon management and staff in addition to normal Departmental functions. For example, the Water Department has devoted time and money in opposing an unreasonable routing of Junipero Serra Freeway for over 9 years.

Following are additional details of the Water Department's operations. Some of the figures are preliminary and therefore subject to minor change.

#### WATER CONDITIONS:

The "All Time High" 1966-67 production from Alameda and Peninsula watersheds, left over 67 billion gallons in local reservoirs at the beginning of fiscal 1967-68.

In carrying out long-range planning to meet the increasing need for water, an additional pipeline was constructed across the San Joaquin Valley by the Hetch Hetchy Department. An additional pipeline around the lower end of San Francisco Bay, and an additional siphon across Alameda Creek were completed, and a Bypass Tunnel around Crystal Springs Reservoir is under construction by the Water Department. Each of these projects required shutting down existing transmission facilities in order to connect the new construction into the system.

Such shutdowns can only be accomplished during winter months when consumer demand is at a low level. Two separate shutdowns were planned: from October 15 to December 1, 1967, for connecting the Bypass Tunnel to Pulgas Tunnel; Hetch Hetchy deliveries were limited to the consumption from Bay Division Pipelines. During December normal operations were resumed. Then on January 2, 1968, Hetch Hetchy deliveries were completely shut down for the work of connecting the San Joaquin and Bay Division Pipelines.

A total of 45 days of partial shutdown and 60 days of total shutdown for construction work was carried out without curtailing water delivery to customers.

With this work accomplished, the capacity of the Hetch Hetchy aqueduct was increased from 220 MGD to approximately 300 MGD.

Storage in local reservoirs at the end of 1967-68 was 48 billion gallons, a decrease of almost 20 billion as the result of shutdowns plus the poor water year of 1967-68.



# WATER PRODUCTION, TRANSMISSION AND CONSUMPTION

## RAINFALL

<u>Gaging Station</u>	<u>1967-68</u>	<u>Comparison to Normal</u>
Crystal Springs Cottage	20.47 inches	78%
Pilarcitos	28.83 inches	65%
Calaveras (Alameda Co.)	17.68 inches	81%

## WATER PRODUCTION

	<u>1966-67</u>		<u>1967-68</u>	
	<u>MG</u>	<u>MGD</u>	<u>MG</u>	<u>MGD</u>
Sunol Filter Galleries	2,112.2	5.8	1,587.7	4.3
Calaveras	23,975.7	65.7	4,319.9	11.8
Crystal Springs	5,407.2	14.8	216.0	0.6
San Andreas	380.1	1.0	--	--
Pilarcitos	2,727.0	<u>7.5</u>	392.3	<u>1.1</u>
TOTAL		94.8		17.8

## WATER IMPORTATION

	<u>1966-67</u>		<u>1967-68</u>	
	<u>MG</u>	<u>MGD</u>	<u>MG</u>	<u>MGD</u>
Hetch Hetchy Sources	67,663.8	185.4	60,265.1	164.6
Sunol Valley				
Filtration Plant	9,188.8	25.2	15,744.9	43.0
Irvington Pumps	148.4	0.4	-0-	-0-

## WATER CONSUMPTION

	<u>Million Gallons Per Day</u>	<u>% Increase Over Previous Year</u>
City	104.54	1.1
Suburban	131.13	17.1
Systemwide	235.67	9.4





## WATER QUALITY

Normal water treatment practices for safeguarding the San Francisco Water supply were in force throughout the year. Disinfection of all supplies was continuous. A total of 2,539,739 pounds of chlorine was used during the year at the various chlorination stations.

Except for brief shutdowns for maintenance, repairs and adjustments, all water leaving Peninsula reservoirs was fluoridated, other than relatively small quantities delivered to the City of Millbrae through the service connections on the San Andreas Branch of the Sunset Supply Line. A total of 435,595 pounds sodium silicofluoride and 544,133 pounds of fluosilicic acid were used during the year, with dosages at the operating stations averaging 0.86 parts per million. This amount, added to the natural fluoride content of the water, resulted in an average total fluoride content in the water served to consumers of 0.91 parts per million.

A total of 2,440,284 pounds of lime was added to the water coming from mountain sources to reduce the corrosive tendencies of this soft water.

Each of the storage reservoirs on the Peninsula and Calaveras Reservoir received at least one copper sulfate treatment for the control of algae growth. A total of 209,380 pounds of copper sulfate was used for algae control during the year.

To remove excessive turbidity from San Andreas Creek water before it enters Crystal Springs Reservoir, 354,048 pounds of dry alum (48.1% aluminum sulfate) were mixed with the runoff waters as needed during periods of turbid flow.

A total of 137,123 pounds of sulphur dioxide was used during the year to partially dechlorinate water drawn from sources that required high dosages of chlorine to control bacteriological quality.

During the year a total of 686,300 linear feet of distribution mains was flushed within the City's system to remove sediment and products of corrosion in order to maintain the quality of water delivered to our customers. In addition to the above there were 259 individual spot flushing operations carried out to eliminate or prevent "dirty water" or other complaints.

## CONSTRUCTION

During the fiscal year the Department handled 72 formal construction contracts amounting to \$15,515,814. Forty-seven were new contracts awarded during the year, of which 34 were completed, 5 were under construction, and 8 had not started



construction at the close of fiscal 1967-68. Twenty-five contracts were under construction at the beginning of 1967-68, of which 22 were completed during the year. The money actually spent on contracts during the fiscal year 1967-68, including engineering and inspection costs bid by the contractor on the cast iron main contracts was approximately \$8,158,914.

#### DISTRIBUTION AND DELIVERY

Feeder and distribution mains continue to be installed in the distribution system as either replacements or additions in order to improve service to consumers and to afford better fire protection. A total of 13.8 miles of new mains were laid during the year and 5.9 miles were removed or abandoned in the same period, adding a net of 7.9 miles to the distribution system within the City. There was a total of 1160.7 miles of water mains in the City Distribution System on June 30, 1968.

Under a Professional Services Agreement for Waste Water Survey, a total estimated savings of 900,000 gallons of water per day resulted from the location and repair of blind leaks during the fiscal year to June 30, 1968.

The Department installed 160 new services in the City during the year. The total number of 162,613 active customers on June 30, 1968, was 410 more than a year ago. Due to the advanced age and obsolescence of many of the service pipes to our consumers, it was necessary to remove and replace 6,102 services during the year.

#### WATER SALES

	<u>Gross Sales</u>	<u>% Increase Over Previous Year</u>
City *	\$11,709,230	3.08
Suburban	9,613,061	8.09
Systemwide	21,386,621	5.28

\* This includes water supplied to San Francisco municipal departments free of charge in an amount worth \$1,243,587.



LAND AND AGRICULTURE

1967-68

Miscellaneous Income from Rentals . . . .	\$522,726
Walnuts . . . . .	<u>22,760</u>
TOTAL:	<u><u>\$545,486</u></u>

TAXES

The Department paid total property taxes in other counties as follows:

In Alameda County . . . . .	\$ 434,362
In Santa Clara County . . . . .	99,098
In San Mateo County . . . . .	557,348
Total taxes paid in other counties	\$1,090,808

Water is delivered to other San Francisco City and County municipal departments, with no payment being received.

Total value of water furnished	
without payment . . . . .	1,243,587

PERSONNEL

Water system daily consumption has increased 354% and annual revenues have increased 192% since the City took over the water system operation in 1930. During this entire period, permanent employments increased only about 20%.



SAN FRANCISCO WATER DEPARTMENT  
COMPARISON OF BUDGETED AND ACTUAL EXPENDITURES (INCLUDING ENCUMBRANCES)  
FISCAL YEAR  
1967-68

<u>DESCRIPTION</u>	<u>BUDGET</u>	<u>ACTUAL</u>	<u>-UNDER, OVER</u>
Permanent Salaries	\$2,617,631	\$2,465,894	\$-151,737
Allowance for Overtime	23,500	24,491	991
Allowance for Holidays	20,203	15,252	- 4,951
Extended Work Week	58,196	53,790	- 4,406
Temporary Salaries	63,000	73,957	10,957
Wages	2,509,034	2,595,904	86,870
Wages - Gardeners	153,960	151,307	- 2,653
	<u>\$5,445,524</u>	<u>\$5,380,595</u>	<u>\$ 64,929</u>
Contractual Services	524,770	549,985	25,215
Maint. & Repair Auto. Equip.	124,392	141,996	17,604
Heat, Light & Power	349,110	360,958	11,848
Subsistence & Care of Persons	1,200	1,189	- 11
Bond Sale Expense	10,000	2,383	- 7,617
Materials & Supplies	763,000	763,017	17
Compensation Insurance	22,571	40,166	17,595
Injuries & Damages	20,000	30,058	10,058
Fidelity & Damages	1,175	1,487	312
Automobile Insurance	16,960	12,762	- 4,198
Fire Insurance	2,310	3,566	1,256
Other Insurance	12,000	9,967	- 2,033
Commissions for Collections	19,800	15,757	- 4,043
Assessments & Contributions	25,000	39,179	14,179
Membership Dues	620	535	- 85
Fees, Licenses & Permits	8,900	7,146	- 1,754
Retirement Allowance	336,314	385,622	49,308
Social Security	157,687	168,470	10,783
Health Service System	46,415	46,387	- 28
Taxes	1,090,000	1,090,808	808
Rents	4,510	1,428	- 3,082
Services of Other Departments	189,799	189,206	- 593
Electronic Data Processing	300,000	238,117	- 61,883
TOTAL OPERATING BUDGET	<u>\$9,472,057</u>	<u>\$9,480,784</u>	<u>\$ 8,727</u>
Equipment	90,935	88,546	- 2,389
Additions & Betterments	1,076,000	1,076,000	-0-
Reconstruction & Replacement	1,961,000	1,961,000	-0-
Bond Interest & Redemption	4,023,552	3,933,552	- 90,000
TOTAL BUDGET	<u><u>\$16,623,544</u></u>	<u><u>\$16,539,882</u></u>	<u><u>\$- 83,662</u></u>





SAN FRANCISCO WATER DEPARTMENT  
SUMMARY OF RECEIPTS AND EXPENDITURES  
FISCAL YEAR 1967-68

RECEIPTS

<u>REVENUES</u>	<u>BUDGET</u>	<u>ACTUAL</u>	<u>-UNDER, OVER</u>
Revenue from Sale of Water	\$19,200,000	\$20,079,689	\$ 879,689
New Installations	110,000	89,759	- 20,241
Rents, including commissions	450,000	522,726	72,726
Interest	100,000	145,894	45,894
Sale of Walnuts & Other Crops	20,000	22,760	2,760
Miscellaneous Revenue	30,000	22,760	- 7,240
<b>TOTAL GROSS REVENUE</b>	<b>\$19,910,000</b>	<b>\$20,883,588</b>	<b>\$ 973,588</b>

RECEIPTS BY TRANSFER

From Surplus Prior Years	<u>4,000,000</u>	<u>4,000,000</u>	<u>-0-</u>
<b>TOTAL RECEIPTS</b>	<b>\$23,910,000</b>	<b>\$24,883,588</b>	<b>\$ 973,588</b>

LESS

Allocation of Revenue to Hetch Hetchy Project	3,500,000	3,500,000	-0-
Unappropriated Revenue	<u>3,786,456</u>	<u>3,786,456</u>	<u>-0-</u>
<b>TOTAL BUDGET</b>	<b><u>\$16,623,544</u></b>	<b><u>\$17,597,132</u></b>	<b><u>\$ 973,588</u></b>





